MARION ROAD TRUNK SANITARY SEWER PROJECT
ALTERNATIVE URBAN AREAWIDE REVIEW
TECHNICAL ADVISORY COMMITTEE
CONSTRAINT MAPPING/DEVELOPMENT SCENARIO MEETING NOTES

Date/Time: Tuesday, September 25, 2001
1:30-4:30 P.M.

Location: Rochester Public Works Department
Olmsted County Public Works Building
Conference Rooms A and B

Attendees:

	Organization	Representative
TAC	Minnesota Pollution Control Agency	Joellen Rumley
TAC	Olmsted Soil and Water Conservation District	Skip Langer
TAC	Olmsted WCA LGU	John Harford
TAC	Rochester Public Works Department	Richard Freese
TAC	Minnesota Department of Natural Resources	Don Nelson
TAC	Rochester City Council	Dave Senjem
TAC	Rochester Committee on Urban Design & Environment	Christine Schultze
TAC	Olmsted County Environmental Commission	Chuck Michael
TAC	Marion Town Board	Jim Baier
TAC	Marion Township Resident	Tim Swanson
TAC	Marion Township Resident	Ed Scherr
TAC	Marion Township Resident	Jim Mosser
TAC	Rochester-Olmsted Planning Department	Charlie Reiter
Staff	City of Rochester	Barb Huberty
Staff	City of Rochester	Jim Loehr
Staff	Rochester-Olmsted Planning Department	Sandi Goslee
Staff	Earth Tech	Leslie Knapp
Staff	Earth Tech	Mark Rothfork
Staff	Richardson Richter and Associates	Trudy Richter
Staff	Howard R Green	Dave Raby
Staff	Howard R Green	Kevin Pape
Staff	Hoisington Koegler Group, Inc.	Brad Schieb

1.0 WELCOME AND INTRODUCTIONS

Barb Huberty welcomed attendees and attendees introduced themselves and their role in the project.

2.0 REVIEW SUMMARY NOTES FROM LAST TAC MEETING
3.0 REVIEW OF FIELD REVIEW WORKSHEET INPUT

Barb Huberty indicated that this meeting is another opportunity for TAC members to review information about the Project and to provide feedback for the City to consider in preparation of the AUAR documents. No changes were made to the meeting notes from the first session or field review worksheet.

4.0 PURPOSE OF TODAY'S TAC MEETING

After distributing a related handout, Leslie Knapp reviewed the purposes of today's meeting, including the review of environmental features in the project area and the discussion of how they may potentially impact or constrain future development. Information from this meeting will be used to:

- Discuss environmental features and their regulated status.
- Discuss where development is most feasible, given environmental constraints.
- Review and obtain input on a development scenario for analysis in the AUAR. (The development scenario must establish residential and commercial densities that would then be applied to all other AUAR analyses, such as sewer, water, traffic, storm water, etc.)
- Review the project boundaries based on the development scenario.

Many environmental protection measures already exist in local, state, and federal laws. These regulations constrain development to varying degrees. Regulations pertaining to environmental features will be discussed as part of this meeting. One purpose of this meeting is to review how or to what level development should be allowed to proceed with respect to environmental resources and land use features. The relative level of constraint for each feature identified on the inventory maps and as listed in Table 1 will be discussed. The goal will be to complete the AUAR, related constraint mapping, and the development scenario based on the existing federal, state, and local regulatory framework.

Beyond environmental protection measures already provided for by law, the City (as the RGU) can be apprised of additional "unacceptable environmental impacts" in the AUAR study area for their consideration as future recommendations or regulations that could serve to further mitigate currently unregulated environmental impacts. Features that are not currently regulated can be flagged as items warranting further consideration for environmental protection or enhancement through other avenues (e.g., awareness-raising for property owners, developers, planners, elected and appointed officials; development of non-regulatory recommendations for alternative development styles that promote the environment; etc.)

The following steps will help us address meeting goals:

- Review draft inventory maps
- Review level of constraints posed by inventoried features
- Review the composite constraint map
- Discuss development scenario for use in the AUAR
- Discuss the project area boundary

5.0 TEMPORARY IMPACTS VS. LONG-TERM IMPACTS

As described in the previous TAC meeting, Leslie Knapp again reviewed that some types of infrastructure projects related to development, such as sewer and water lines, result in temporary construction impacts to some of the resources identified as potential constraints, such as streams or wetlands. For example, permits required for water or sewer lines that cross streams or wetlands are typically less stringent than those applied to projects that result in permanent conversion of a resource because site conditions are restored once construction is completed. Residential development, commercial development, and roads are examples of development that result in the "permanent" modification of a resource and have more stringent permit requirements. The constraint discussions (to be discussed in Section 7 and related to Table 1) and for the development scenario are targeted to address this more permanent kind of resource conversion.

6.0 REVIEW DRAFT INVENTORY MAPS

Inventory maps presented at the August 29, 2001 Agency and TAC field review meeting (some with minor updates) were reviewed in detail. Data sources, definitions, and the approximate level of accuracy of each type of mapping were discussed.

Leslie Knapp and Brad Scheib explained constraint mapping as an inventory of various land cover types that have some degree of impact on permanent development (residential, commercial/industrial and roads). Maps were compiled to identify and inventory existing features, primarily environmental resources and existing development patterns. When completed, the constraint mapping may reveal certain patterns that will help define where various development densities can occur and where environmental impacts should be avoided, minimized or mitigated. When reviewing the Natural, Cultural and Biological feature map it was asked what "not classified" meant. The Core Team will get back to the TAC on this issue. A list of "special concern" species was requested and later shared, but not distributed per DNR requirements.

7.0 REVIEW OF LEVELS OF CONSTRAINT BY INVENTORIED FEATURE

To create a starting point for TAC discussion, Trudy Richter explained that the Core Staff Team members developed criteria to assess the level of constraint based on existing regulations (since the Mitigation Plan must be an enforceable document). These criteria were presented as a handout and are outlined below. One purpose of identifying constraints and determining the relative level of constraint was to identify areas best suited for development. A constraint table framework was prepared to identify the relative level of constraint a feature could have on development. To establish a basis for discussion by the TAC, the Core Team applied the following ranking system to the features identified on the constraint table:

Level 1 (High) - Areas with the highest level of constraint, due to very restrictive regulatory criteria

- Will likely preclude residential and commercial development

Level 2 (Moderate) - Areas with a moderate level of constraint, due to less restrictive regulatory criteria

- Will likely affect the density of residential and commercial development
- Mitigation is frequently required for impacting many of these features

Level 3 (Low) - Areas with a low level of constraint, due to the absence of regulatory criteria

- Are not likely to preclude residential and commercial development,
- These areas could be more densely developed

A handout (Table 1) was distributed to TAC members so they could see the constraint assignments made by the Core Team for each feature.

Regarding the ranking system for the constraint table, Christine Schultze observed that "low" may cover too many variables and that this should be considered when reviewing the maps.

The Olmsted County General Land Use Plan guides the majority of the project area. This plan identifies four different land use categories: the Resource Protection Area, the 25-Year Urban Service Area, the 50-Year Urban Reserve Area, and the Suburban Development Area. The bulk of the undeveloped land in the project area falls within the 25-Year Urban Service Area that promotes development planning with centralized sanitary and storm sewers and water systems, integrated road systems, public parks, school sites, and public transit.

The Land Use Plan for the Rochester Urban Service Area also addresses future land use planning for part of this area and has designated the bulk of the area as "Low Density Residential" with some areas of "Industrial" and "Commercial" along Marion Road.

Projected or anticipated development needs to be quantified (total housing units and square feet of non-residential development) during the AUAR process. In order to quantify potential future development, appropriate density levels need to be assigned to 'developable' areas.

Avoidance, minimization, and mitigation of environmental impacts can be accomplished through various practices, such as applying innovative development patterns that achieve higher allowable densities while imposing lower impacts on environmental resources.

"Developable" areas will be identified by the constraint mapping exercise conducted by the Core Team. Constraints were assigned a "ranking", which will help in determining how they are planned for in the development scenario. . Kevin Pape observed that it is important to remember when establishing the density that the AUAR looks at the worst case or highest reasonable and feasible density that could happen.

Leslie Knapp reviewed with the TAC all of Table 1, discussing the level of constraint assigned by the Core Team and its potential impact on development. It was suggested by John Harford that a feature be added for "flood prone" soils as indicated in County data and that these should be considered "moderate" due to the requirement for a conditional use permit. John Harford also stated that when considering slopes, people should remember that slopes are used to calculate site capacity at the time a developer brings in their proposal for review, thus affecting the development density and the site impact. TAC members also requested that the following two features be classified as "moderate" instead of "low".

- Lands adjacent to existing large lot development due to Section 64.1111 of the Rochester Land Development Manual regulating transitional densities.
- Sinkhole locations to due constructibility issues.

The TAC also indicated their desire to "flag" for further consideration of alternative environmental protection or enhancement measures certain features including the biodiversity significance features, aggregate resources, and the Decorah shale or Decorah edge areas. Don Nelson suggested possible mitigation measures to consider for the biodiversity significance features flagged, which included:

- Establishing buffers
- Lower density or cluster type of development
- Enhancements such as controlling invasive species (buckthorn, etc.), improving or expanding native communities or habitat
- Conservation easements, maintaining connectivity and potential for greenway development
- Other ideas for non-regulatory mechanisms to encourage further protection.

Chuck Michaels raised construction methods related to the Decorah edge as a potential mitigation consideration.

The TAC Team and staff then took a 15-minute break to review and provide input on the inventory maps.

8.0 REVIEW COMPOSITE CONTRAINT MAP

Brad Scheib reviewed the composite map resulting from the inventory maps and the Table 1 Constraint ranking. Mechanisms to address high and moderate constraints will need to be referenced in the Mitigation Plan. Modifications made to Table 1 at the meeting will be incorporated in the mapping.

9.0 DISCUSS DEVELOPMENT DENSITIES AND DEVELOPMENT SCENARIO

After distributing a handout with a draft development concept map, Brad Scheib shared several considerations regarding development density within the project area. He indicated that a draft development scenario was compiled as a basis for discussion by the Core Team to reflect the potential highest level of development and related impact that is reasonable, feasible and likely for the project area. As such, only areas of high constraint identified in Table 1 that will likely preclude residential or commercial development are shown on the map and are not included in the developable area. Areas of moderate and low constraints are not shown on the development scenario map, but can be flagged so that future development plans and/or mitigation measures to moderate the level of impact can be recommended in the AUAR.

When finalized, the development scenario will be used to generate the quantity of development that is necessary to evaluate potential impacts. Some calculations, such as trip generation and sewer flow, will need to utilize more refined sub-districts of the project area. When individual projects are proposed within the project area that generate a greater impact than what is assumed in the project area-wide development scenario, the AUAR will need to be amended or a separate EAW for that development project may need to be completed

The AUAR draft development scenario is based on the policy direction and land use guidance that is provided in the City and County Land Use Plans. The Land Use Plan for the Rochester Urban Service Area designates the majority of the area as "low density" residential. This plan defines this category as follows: *"…intended primarily for single family housing and, where appropriate, other single, isolated uses that are of a similar character and intensity that are supportive of the neighborhood (such as neighborhood groceries or small offices)…"*. The Olmsted County General Land Use Plan designates the majority of the project area as an "Urban Service" area. This area is intended to be served by public services such as sewer, water, roads, parks, schools, etc.

From these land use designation definitions we can construe that the majority of the project area is designated for lower density single-family development with urban services and infrastructure. However, throughout the Land Use Plan, policy language suggests that neighborhoods be designed to contain a mixture of housing types provided good design is used to maintain a lower density residential character and to minimize development impacts such as excessive traffic. The overall development pattern in Rochester would suggest that this trend would continue to occur in the AUAR project area. The plan states *"Mixtures of single and multi-family uses that arise as a result of planned unit developments in low density areas are also consistent with the plan."* Furthermore the plan emphasizes a range of densities and housing types be encouraged to provide housing choice and affordability into neighborhood life. These issues pose several considerations that need to be made when quantifying how much development might occur as a result of the development scenario.

For the draft development scenario, densities for low-density development have been assumed to range between a very low *average* density of one unit per acre in areas with moderate or low development

constraints to a higher *average* density of six units per acre in areas where minimal constraints exist and good infrastructure supports a higher level of development. Individual developments within the project area may be as high as 15 or more units per acre; however, the overall project area density is an average of about three units per acre. As directed by the Land Development Manual Minimum Lot Standards, density values assigned to undeveloped parcels adjacent to existing development were compatible with existing development densities.

Neighborhood commercial uses (nodes of less than 10 acres) are also allowed in low-density residential areas and in many ways they are encouraged to be part of the neighborhood instead of stand alone, automobile-oriented commercial uses. These nodes provide daily convenience shopping and personal services needs and reduce the need to drive across town or into the City for single purpose trips.

The land use plan also identifies an industrial land use pattern along Marion Road. This industrial use is assumed to be a light industry/manufacturing-type use and will be evaluated based on square feet of commercial space or by total employee projections.

Recreational or environmental corridors are encouraged throughout the County and City land use plans; however, no regulatory framework requires this pattern. The constraint mapping reveals a network of environmental features that existing regulations will protect. Other moderate level constraints fit into this framework to form a series of potential "greenways" that create opportunities for developments to be connected either by a trail or open space. The development scenario illustrates these possible connections as opportunities and not requirements. Don Nelson commented that the locations of flagged low-level constraints should also be considered within the corridor context to enhance the connectivity of natural communities.

TAC members shared some concerns regarding the densities identified. Christine Schultze felt that specific densities should not be shown as they could cause developers looking at the map to think that those were the only density ranges allowed for those areas which is misleading. John Harford indicated that areas just south of Highway 14 and east of 40th Avenue and north of Bear Creek would likely have the potential for higher density development. Richard Freese commented that he would like densities to be expressed using a uniform unit of measure that coincides with the land use plans and zoning ordinances. The Core Team will review this and see if density could be referenced in a more consistent manner.

10.0 DISCUSS PROJECT AREA BOUNDARY

Barb Huberty indicated that the original project area boundary was created using a rough calculation of sewer capacity from the trunk sewer line extension based on average development densities across a broad geographic area. As part of the AUAR process, the project area needs to be refined based on a more complete assessment of constraints, the existing and expected development patterns, and the development scenario to be adopted by the RGU, in addition to pipe capacity calculations.

After evaluating these factors, the Core Team has a recommendation for a new project area boundary. The proposed new boundary uses County Road 11 (50th Ave.) as the eastern boundary until it reaches the 50-Year Urban Reserve Area. The boundary then jogs around the undeveloped portions of the URA to rejoin the original boundary.

Richard Freese explained that the original Phase 1 and 2 refers to the boundaries of the sewer study (Water Quality Protection Program) and were used to negotiate service extensions prior to completion of the AUAR. This terminology is no longer applicable during the AUAR process, which looks at a "project area".

The proposed changes acknowledge that the majority of the Suburban Development Area is unlikely to ever be served by sanitary sewer because construction was completed in accordance with regulations to reserve lot space for ISTS repair or replacement and because the low development densities make service economically impractical. County Road 11 was selected as the boundary through the Suburban Development Area. However, to recognize that several small-lot subdivisions that are adjacent to County Road 11 may have a need for future sewer connection should their ISTSs fail. Those subdivisions are: Meadow Brook, Brookside Acres, Sandy Slopes and Deerwood Park.

The sewer capacity calculations used to help determine the new project area boundary took into account the contributions from these small-lot subdivisions even though they may never opt to connect. Capacity for serving Chester Heights was also accounted for in the capacity calculations.

11.0 DISCUSS NATURAL/RECREATIONAL CORRIDOR CONSIDERATION

Barb Huberty described that as part of the constraint mapping process, the Core Team has identified natural communities and water features that have the potential to become part of a network of environmental/ recreational/wildlife/open space corridors. Linkages between the constraint corridors to form a more complete network could be identified as opportunities for consideration. Since this type of designation is not a requirement of the AUAR process, corridor suggestions can be given to the Rochester Park Department and the Rochester-Olmsted Planning Department for their consideration as a future policy initiative.

12.0 REVIEW PROJECT SCHEDULE AND NEXT STEPS

The project schedule was distributed and Leslie Knapp mentioned that the next opportunity for public input would be a public open house in October or early November to review pertinent aspects of the inventory, constraint mapping, development scenario, and project area boundary before the Order for Review goes to the City Council for adoption. The next TAC meeting will be held to review the draft AUAR and mitigation plan sometime in late January.

SUMMARY OR QUESTIONS RAISED AND CORRESPONDING RESPONSES

<u>Surface Water Map</u>

- Year of NWI mapping? Around 1979.

<u>Natural & Cultural Resources Map</u>

- Should the Trapp Mounds be addressed in the AUAR process or prior to development? This area was ranked as a low constraint because it can be addressed prior to development. The property owner or developer should have a survey conducted to determine if the mounds are present or not prior to development.
- What does “not classified mean”? Not a likely candidate or surveyed for natural features because the area was significantly disturbed.
- The relationship between the State (~1995-1997) and County (~1999) biological inventories was clarified. The County survey was done using DNR Natural Heritage Program staff.

<u>Zoning Map</u>

- What was the source of the Phase I and Phase II designations? Determined in conjunctions with MPCA as it related to the sewer permit. Phase I was based on the levels of interest by neighborhoods to connect to City Sewer and Phase II was the area that could be served by remaining sewer capacity. The number of sewer connections allowed in Phase I was a stipulation of the sewer permit. Connections in Phase II can not be made until the AUAR is conducted. Now that the AUAR is underway, Richard Freese stated

that he felt the Phase boundaries only added confusion (since it is a permit issue and not an AUAR issue) and should no longer be referenced.

Traffic Constraints Map

- The extension for Co. Rd. 101 will ultimately tie into 48th St.
- The possible constraint intersections were the locations for traffic count studies.
- MN DOT has scheduled a TH 14 upgrade for 2001 to 2002. It will extend the four-lane all the way to Eyota (from about 40th Avenue) and will change the alignment near the railroad.
- There is no time frame set for any road extensions within the study area for at least the next five years (20th St., 40th Avenue, and Co. Rd. 143) nor are there priorities associated with any of the proposals. The 20th St. extension will need state and/or federal funding because it will be a very expensive road (due to the physical features). The Co. Rd. 143 extension would likely take place at the time development is proposed in that area.
- Revise map so that freeways are a different color than the bluff lands. Bluff lands should be removed and the three slope categories shown.

Development Pattern Map

- Refer to the "buffer" areas as transition zones as they relate to the compatibility requirement of Land Development Manual Section 64.111.
- The fully constrained lots less than two acres means that they are unlikely to subdivide because it will not be cost-effective to connect to sewer and water.

Land Use/Land Use Plan/Zoning Maps

- The features on these maps were previously shown on one map (with the 8/29 meeting materials).

Prime Farm Land Map

- This feature was removed as a constraint (since 8/29 meeting) since the project area includes very little "Resource Protection Area" and because the prime farm land tracts remaining are generally small and disconnected.

Table 1

- Add Flood Prone areas (determined by mapping the alluvial soils) to the map. These areas are dealt with on a case-by-case basis using Conditional Use permits as localized flooding due to local drainage patterns. These locations may be unrelated to floodplain or floodway locations. The alluvial soils should be in the hydric and floodplain soils map layers.
- These slope categories do not correspond with those used to determine the site capacity during a General Development Plan review. It was determined that using the categories shown was fine and that the General Development Plan item was a separate issue related to density calculations.
- Change "Lands adjacent…" to "Transitional lands adjacent…". Delete "no regulatory requirement and add the Land Development Manual (Sec. 64.111) reference. Transitional needs to be defined and examples need to be provided.
- Change sinkholes to moderate constrain due to constructability issues.
- The DNR would like to flag the biodiversity significance impacts (natural communities) for further consideration using mechanisms such as buffers, lower density housing, greenways (to protect contiguity or connectivity), enhancements like plantings, invasive species control and conservation easements.
- A question was asked about what endangered and special concern species were present. Leslie Knapp provided that information via discussion since the species are not to be shown on the map as part of the requirements of using the DNR Natural Heritage Database.
- The DNR would also like to flag the Aggregate Resources feature because it has become an issue elsewhere because where development has happened on top of aggregate resources, the resource becomes unavailable for use and there is an aggregate shortage in Minnesota.

- Regarding the Decorah Edge, reference should be made that there are no regulatory requirements specifically related to this feature but that existing regulations for wetlands and slopes may encompass some areas of the Decorah Edge.

Development Scenario

- The split between "constrained lands – environmental" and "constrained lands – developed" is misleading. The description should follow the Table 1 approach and it should be to "highly constrained lands – regulatory restrictions".
- A note should be added to "Constrained Lands – Developed" that explains this reference applies to developed and/or platted parcels from one to 5 units per acre.
- Hilltop Oaks could be split and should not be shown as "Constrained Lands – Developed". The owners each bought three lots and they had to build on the lot closest to the road [Shadow Drive SE].
- A "modified net" approach was used to calculate density. It takes into account the high constraint acres, but does not include the acres that would be lost for roads, storm water facilities, parkland dedication, etc. Richard Freese indicated that density definitions should be consistent as they relate to the land use plans, the Land Development Manual and the AUAR. If those documents use gross acres, our development scenario should as well.

Other comments/questions:

- Can the TAC members receive updated copies of the maps presented today?
  Response: Yes, they will be distributed to the TAC members shortly before the public meeting once the edits are finalized.
- Will the updated maps be posted on the Web Site?
  Response: Yes, at the time the revised versions are distributed to the TAC members.
- It would be nice to have a summary of pending and proposed developments in and around the AUAR area
  Response: the City staff will pull this information together for discussion at the next TAC meeting.
- What is the development density of the Valley Side Estates subdivision (mix of town homes and single family dwellings)?
  Response: The City will find out the development density in this area before the next TAC meeting.
- How can the transition areas be better depicted with respect to densities?
  Response: The Core Team will try and create a better way to present this concept.
- Can the Township be involved as a referral agency in the review of development proposals (GDPs or PUDs) that happen within the Orderly Annexation Areas?
  Response: The Core Team will research this.

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TABLE 1
Revised September 28, 2001

RELATIVE LEVEL OF CONSTRAINT TO DEVELOPMENT
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Level of Constraint to Development [1]			Feature	Regulatory or Policy Framework
High	Moderate	Low		
X			Existing roads	Thoroughfare Plan and official mapping.
X			Water features (rivers, streams, lakes)	DNR Public Waters Work Permits Program Minnesota Statutes, Section 103G.245; U.S. Army Corps of Engineers Section 404 of the Clean Water Act.
X			Existing parkland	Rochester City Zoning Ordinance and Land Development Manual, Section 64.440; Park Plan.
X			Floodway	44 CFR 60.22-Floodprone Areas, Part C; Flood Control Permit U.S. Army Corps of Engineers & MnDNR; Olmsted County Floodplain Review; City zoning 62.800 Flood Districts and Intent; 1979 Land Use Map plan.
	X		100-year floodplain (other than floodway)	44 CFR 60.22-Floodprone Areas, Part C; Flood Control Permit U.S. Army Corps of Engineers & MnDNR; Olmsted County Floodplain Review; City zoning 62.800 Flood Districts and Intent; 1979 Land Use Map plan.
	X		Floodprone Areas	County Conditional Use Permit .
		X	500-year floodplain	44 CFR 60.22-Floodprone Areas, Part C; Olmsted County Shoreland Review.
	X		NWI wetlands (A)	U.S. Army Corps of Engineers Section 404 of the Clean Water Act Wetland Permits; Letter of Concurrence for Nationwide Permits; Section 401 Water Quality Certification; MN Wetland Conservation Act of 1991, as amended, Permits.
	X		Hydric (wetland) soils	Indicators of possible wetland areas not included in the NWI mapping.

[1] **Level 1 (High)** - Areas with the highest level of constraint, due to very restrictive regulatory criteria

- Will likely preclude residential and commercial development

Level 2 (Moderate) - Areas with a moderate level of constraint, due to less restrictive regulatory criteria

- Will likely affect the density of residential and commercial development
- Mitigation is frequently required for impacting many of these features

Level 3 (Low) - Areas with a low level of constraint, due to the absence of regulatory criteria

- Are not likely to preclude residential and commercial development,
- These areas could be more densely developed

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High	Moderate	Low		
	X		Slopes 18-25%	Olmsted County General Land Use Plan.
X			Slopes > 18% in shoreland zoning districts	MnDNR shoreland regulations; Olmsted County General Land Use Plan.
X			Slopes ≥ 26% (Note: from a mapping standpoint, slopes ≥ 26% are broken down into two categories: slopes from 26 to 49% and slopes ≥ 50%.)	Olmsted County General Land Use Plan; No regulatory requirement.
	X		Transitional lands adjacent to existing large lot development	Olmsted County General Land Use Plan. Land Development Manual (Sec. 64.111).
	X		Spring/seep location (see wetlands feature)	See wetland feature
	X		Sinkhole location	Olmsted County General Land Use Plan; No regulatory requirement; constructibility concern.
		X	Lowland hardwood forest	DNR Natural Heritage (B); County land use plan protecting woodland; No regulatory requirement.
		X	Oak forest	DNR Natural Heritage (B); County land use plan protecting woodland; No regulatory requirement.
		X	Oak savanna or woodland	DNR Natural Heritage (B); County land use plan protecting woodland; No regulatory requirement.
		X	Known or likely prairie remnants	DNR Natural Heritage (B); No regulatory requirement.
		X	Grassland/old pasture with possible prairie remnants	DNR Natural Heritage (B); No regulatory requirement.
		X	Shrubland with possible prairie remnants	DNR Natural Heritage (B); No regulatory requirement.
		X	Outstanding biodiversity significance	DNR Natural Heritage (B); No regulatory requirement.
		X	High biodiversity significance	DNR Natural Heritage (B); No regulatory requirement.
		X	Moderate biodiversity significance	DNR Natural Heritage (B); No regulatory requirement.

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High	**Moderate**	**Low**		
X			Natural Heritage Information System (B) - endangered species location	Federal Endangered Species Preservation Act of 1973, as amended in 1978, 1982, and 1988; Minnesota Statutes Chapter 84.0895; MN Rules Chapter 6134; Olmsted County General Land Use Plan.
	X		Natural Heritage Information System (B) - threatened species location	Federal Endangered Species Preservation Act of 1973, as amended in 1978, 1982, and 1988; Minnesota Statutes Chapter 84.0895; MN Rules Chapter 6134; Olmsted County General Land Use Plan.
		X	Natural Heritage Information System (B) - special concern species location	DNR Natural Heritage (B); No regulatory requirement.
		X	Trapp Burial Mound area, recorded archaeological site (cultural resource survey would be recommended prior to development)	Minnesota Private Cemeteries Act, which prohibits the disturbance of burials, and the significance attributed to mounds by Native American groups require that the possible existence of the mounds be further explored.
		X	Upland area of moderate potential for archaeological sites (cultural resource survey would be recommended prior to development)	State Historic Preservation Office coordination regarding the potential for intact archaeological resources; Minnesota Field Archaeology Act; Section 106 of the National Historic Preservation Act.
		X	Areas within the high potential for cultural resources along creeks (cultural resource survey would be recommended prior to development)	State Historic Preservation Office coordination regarding eligibility for listing on the National Register for Historic Places and related buffer requirements; Minnesota Historic Sites Act; Section 106 of the Historic Preservation Act.
		X	Lands difficult to serve because of high costs to extend infrastructure (typically due to topographical constraints and the need for lift stations)	Land Use Plan for Rochester Urban Service Area; Olmsted County General Land Use Plan.
		X	Aggregate Resources	Olmsted County General Land Use Plan, Resource Management Policies.

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High	Moderate	Low		
		X	Depth to bedrock	Septic system requirement, may not apply to areas with sewer service, unless cost issue per Olmsted County General Land Use Plan.
		X ○	Decorah shale and Decorah edge (as it relates to construction issues)	No regulatory requirements specifically related to this feature; existing regulations for wetlands and slopes may encompass some areas of the Decorah Edge.

Notes:

A Wetlands not shown on NWI mapping are typically identified and delineated as part of the development process. Hydric soil mapping was also used as a wetland indicator.

B **The Natural Heritage Information System (NHIS)** provides information on Minnesota's rare plants, animals, native plant communities, and other rare features. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, natural communities, and other natural features. Its purpose is to foster better understanding and conservation of these features. Natural communities are functional units of the landscape that are characterized and defined by their most prominent habitat features - a combination of vegetation, hydrology, landform, soil, and natural disturbance cycles. Although natural communities have no legal protection in Minnesota, the Natural Heritage and Nongame Research Program and the Minnesota County Biological Survey have evaluated and ranked community types according to their relative rarity and endangerment throughout their range. Locations of high quality examples are tracked by the Rare Features Database. This information is for use in:

Environmental Review: for review of specific project-related impacts through the state environmental review process. Examples include commercial and residential developments, transportation projects, utility construction, landfills, mining, and flood control projects.

Planning: to notify private and public land use planners and developers of locations of rare species or biologically sensitive areas early in the planning process.

Management: to provide data to government agencies and other land management organizations so that management decisions can be made with consideration for rare features.

○ **Flagged:** Features that were ranked low, but flagged for further consideration of mitigation measures (See Table 2).

[1] **Level 1 (High)** - Areas with the highest level of constraint, due to very restrictive regulatory criteria

- Will likely preclude residential and commercial development

Level 2 (Moderate) - Areas with a moderate level of constraint, due to less restrictive regulatory criteria

- Will likely affect the density of residential and commercial development
- Mitigation is frequently required for impacting many of these features

Level 3 (Low) - Areas with a low level of constraint, due to the absence of regulatory criteria

- Are not likely to preclude residential and commercial development,
- These areas could be more densely developed

TABLE 2
October 1, 2001

POTENTIAL ENVIRONMENTAL ENHANCEMENTS (1)
MARION ROAD TRUNK SANITARY SEWER PROJECT
ALTERNATIVE URBAN AREAWIDE REVIEW

FEATURES IDENTIFED AS FLAGGED (C) IN TABLE 1	MITIGATION CONSIDERATIONS
Outstanding biodiversity significance	Following mitigation measures should be considered: • Establishing buffers • Lower density or cluster-type of development • Enhancements such as controlling invasive species (buckthorn, etc.), improving or expanding native communities or habitat • Conservation easements • maintaining connectivity via potential greenway development,
High biodiversity significance	
Moderate biodiversity significance	
Natural Heritage Information System (B) - special concern species location	
Trapp Burial Mound area, recorded archaeological site	May require cultural resource survey prior to development if federal permits or funding are associated with development proposals.
Upland area of moderate potential for archaeological sites	May require cultural resource survey prior to development if federal permits or funding are associated with development proposals.
Areas within the high potential for cultural resources along	May require cultural resource survey prior to development if federal permits or funding are associated with development proposals
Aggregate Resources	The excavation of aggregate resources should be considered in advance of development in these areas. In locations where development has occurred on top of un-mined aggregate resources, the resource has become unavailable for use, which conflicts with the aggregate shortage in Minnesota.
Decorah shale and Decorah edge (as it relates to construction issues)	The use of special construction methods should be considered in these areas.

(1) Technical Advisory Committee Members recommended that these low-level constraints be advanced for further consideration of alternative protection or enhancement measures in the absence of regulatory mechanisms that require mitigation.